3270 SUPEROPTIMIZER®/CICS for VSE Installation Guide

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Before Contacting BMC Software

Before you contact BMC Software, have the following information available so that Customer Support can begin working on your problem immediately:

- product information
  - — product name
  - — product version (release number)
  - — license number and password (trial or permanent)
- operating system and environment information
  - — machine type
  - — operating system type, version, and service pack or other maintenance level such as PUT or PTF
  - — system hardware configuration
  - — serial numbers
  - — related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - — product error messages
  - — messages from the operating system, such as `file system full`
  - — messages from related software

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About This Book

3270 SUPEROPTIMIZER®/CICS for VSE (SUPEROPT®) is a network performance product from BMC Software, Inc. This optimization product reduces response times to terminals and printers, increasing user productivity.

Note: The information in this book applies to VSE/ESA environments only. For information about installing SUPEROPT in an MVS environment, see the *OS/390 and z/OS Installer Guide*.

This book provides instructions for installing SUPEROPT and is intended for system programmers, administrators, and Customer Information Control System (CICS) technical support staff. To use this book, you should be familiar with the following items:

- your database management system (DBMS)
- CICS, Multiple Virtual Storage (MVS) systems, job control language (JCL), and the Interactive System Productivity Facility (ISPF)
- your client and host operating systems

For example, you should know how to respond to ISPF panels and how to perform common actions in a window environment (such as choosing menu items and resizing windows).

How This Book Is Organized

This book is organized as follows:

Chapter/Appendix	Description
Chapter 1, “Introduction”	provides information about system and environment requirements, and contains information about product tapes and the BMC Software 30-Day-Plus Free Trial offer
Chapter 2, “Preparation”	provides information about preparation for SUPEROPT installation
Chapter 3, “VSE/ESA Installation”	provides instructions for unloading the VSO-labeled distribution tape
Appendix A, “BMC Software Product Authorization”	describes the BMC Software Product Authorization utility

In addition, a glossary of terms and an index appear at the end of the book.

Related Documentation

BMC Software products are supported by several types of documentation:

- online and printed books
- online Help
- release notes and other notices

In addition to this book and the online Help, you can find useful information in the publications listed in the following table.

Category	Document	Description
installation documents	*3270 SUPEROPTIMIZER/CICS Customization Guide*	provides instructions for customizing 3270 SUPEROPTIMIZER/CICS for VSE or 3270 SUPEROPTIMIZER/CICS after the product has been installed
core documents	*3270 SUPEROPTIMIZER/CICS General Information*	provides an overview of how SUPEROPT can enhance network performance
	3270 SUPEROPTIMIZER/CICS User Guide	provides instructions for using SUPEROPT to improve network performance at your site
	3270 SUPEROPTIMIZER/CICS Messages Manual	contains the product messages and explanations
supplemental documents	release notes, technical bulletins, flashes	provide current information about SUPEROPT

Online and Printed Books

The books that accompany BMC Software products are available in online format and printed format. If you are a Windows or Unix user, you can view online books with Acrobat Reader from Adobe Systems. The reader is provided at no cost, as explained in "To Access Online Books." You can also obtain additional printed books from BMC Software, as explained in "To Request Additional Printed Books."

To Access Online Books

Online books are formatted as Portable Document Format (PDF) files. You can view them, print them, or copy them to your computer by using Acrobat Reader 3.0 or later. You can access online books from the documentation compact disc (CD) that accompanies your product or from the World Wide Web.

In some cases, installation of Acrobat Reader and downloading the online books is an optional part of the product-installation process. For information about downloading the free reader from the Web, go to the Adobe Systems site at **http://www.adobe.com**.

To view any online book that BMC Software offers, visit the support page of the BMC Software Web site at **http://www.bmc.com/support.html**. Log on and select a product to access the related documentation. (To log on, first-time users can request a user name and password by registering at the support page or by contacting a BMC Software sales representative.)

To Request Additional Printed Books

BMC Software provides printed books with your product order. To request additional books, go to **http://www.bmc.com/support.html.**

Online Help

SUPEROPT includes online Help. In the SUPEROPT ISPF interface, you can access Help by pressing **F1** from any ISPF panel.

Release Notes and Other Notices

Printed release notes accompany each BMC Software product. Release notes provide current information such as

- updates to the installation instructions
- last-minute product information

In addition, BMC Software sometimes provides updated product information between releases (in the form of a flash or a technical bulletin, for example). The latest versions of the release notes and other notices are available on the Web at **http://www.bmc.com/support.html**.

Conventions

This section provides examples of the conventions used in this book and explains how to read ISPF panel-flow diagrams.

General Conventions

This book uses the following general conventions:

Item	Example
information that you are instructed to type	Type **SEARCH DB** in the designated field.
specific (standard) keyboard key names	Press **Enter**.
field names, text on a panel	Type **the appropriate entry** in the **Command** field.
directories, file names, Web addresses	The BMC Software home page is at **www.bmc.com**.
nonspecific key names, option names	Use the HELP function key. KEEPDICTIONARY option
MVS calls, commands, control statements, keywords, parameters, reserved words	Use the SEARCH command to find a particular object. The product generates the SQL TABLE statement next.

code examples, syntax statements, system messages, screen text	`//STEPLIB DD`
	
	`The table` *`table_name`* `is not available.`

emphasized words, new terms, variables	The instructions that you give to the software are called *commands*. In this message, the variable *file_name* represents the file that caused the error.

This book uses the following types of special text:

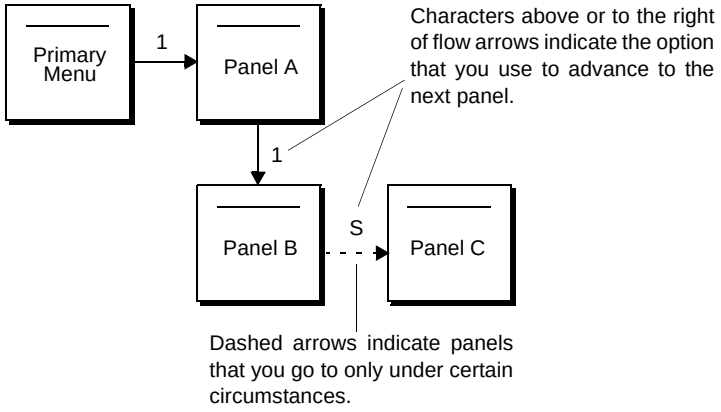
Note: Notes contain important information that you should consider.

Warning! Warnings alert you to situations that could cause problems, such as loss of data, if you do not follow instructions carefully.

Tip: Tips contain useful information that may improve product performance or that may make procedures easier to follow.

Panel-Flow Diagrams

Panel-flow diagrams summarize the ISPF panels that you see while completing specific tasks. The following example explains how to read a panel-flow diagram:



Chapter 1 Introduction

This chapter provides an overview of the installation process. This chapter contains the following sections:

Overview

3270 SUPEROPTIMIZER®/CICS for VSE (SUPEROPT®) is a network performance product that operates transparently in your environment. As a comprehensive optimization product, it exploits the capabilities of your 3270 hardware and improves network performance by reducing response times to terminals and printers, increasing user productivity.

SUPEROPT comprises two main components—the Optimizer and the Monitor. The Optimizer component performs the optimization. The Monitor component lets you monitor the activity of the product and change option settings for the product.

SUPEROPT installs transparently in your CICS regions and intercepts CICS data streams. The product does not change, modify, or “zap” the CICS system code in any way. This product provides optimization of the double-byte character set (DBCS), and the single-byte character set.

SUPEROPT substantially reduces the length of outbound and inbound data streams for 3270 terminals and SNA character string (SCS) printers. For outbound data streams, reduction can be as high as 90 percent. Usually, reduction is in the range of 50 to 90 percent. For inbound data streams, reduction can be as high as 90 percent. Usually, reduction is in the range of 40 to 90 percent.

Reduction in data stream length reduces the time that is required to handle the data stream in the communication controller and the line time to deliver the data stream to its final destination. This savings equates to a reduction in response time for your end users.

BMC Software 30-Day-Plus Free Trial

BMC Software recognizes the special needs that data processing organizations have when evaluating new software. To serve these needs, BMC Software offers a free trial of its products at your site:

1. Install the BMC Software product on your test system. Apply the product authorization password that is shipped with the product to initiate the trial period.

2. Become familiar with the product's operation. When you are ready, move the product to your production system.

3. At the end of the trial period, contact your BMC Software sales representative to arrange for acquisition of the product. If the product does not meet your needs, return the program tape and product documentation to BMC Software.

All BMC Software tapes and documentation are confidential and are for your organization's exclusive use. By accepting this free trial, you acknowledge that the product is a trade secret of BMC Software.

Product Authorization

BMC Software licenses SUPEROPT for use on individual CPUs. Each CPU has a CPU ID, which is based on the host serial number and model number. To be able to use the product on a given CPU, product authorization must be provided. BMC Software Contracts Administration provides product authorization after a license agreement for the product is returned.

When you install a product for a trial, you will need to apply a product authorization password. When you obtain a permanent product license, you will need to complete the CPU ID authorization procedures. These authorization procedures and use of product authorization passwords are explained in Appendix A, "BMC Software Product Authorization."

If you have any questions or concerns about product authorization, contact your BMC Software sales representative.

Basic Tasks

The installation procedure for SUPEROPT involves the following basic tasks:

- unloading the tape or downloading the image file from the BMC Software Support Web site
- customizing a number of batch jobs
- running each required batch job to install the products

To install 3270 SUPEROPTIMIZER/CICS for VSE, use the batch installation process that is described in Chapter 3, “VSE/ESA Installation.”

When you have installed the product, you can customize SUPEROPT by using manual customization. For more information, see the *3270 SUPEROPTIMIZER/CICS Customization Guide*.

Product Distribution

Distribution tapes are normally 3480 tape cartridges. However, you can request a standard-labeled 1600 BPI or 6250 BPI tape if one is needed for your site.

Each distribution tape contains a copy of SUPEROPT. You can run the product on a trial basis if your site does not have CPU ID authorization for it. For details about using the product on a trial basis, see “BMC Software 30-Day-Plus Free Trial” on page 1-3.

When you receive a distribution tape, check the label to ensure that it identifies the appropriate operating system for your site. For VSE/ESA installations, the VOLSER of the tape is VSO*xxx* (where *xxx* is a three-character sequence identifier). For information about unloading a VSO-labeled tape, see Chapter 3, “VSE/ESA Installation.”

BMC Software maintenance tapes include all modules for SUPEROPT, not just the modules that have changed. If your data center has more than one tape, install the tape with the most current date on the tape label. It will contain all changes to that date.

You can unload the product modules into the same library, or you can use a different library. If you use the same library, the new modules will replace the old modules. Ensure that the unload does not run out of space. This condition would cause a partial unload and result in a library of *mixed* modules.

Warning! If you plan to use the same libraries, BMC Software recommends that you have a valid backup of the current product libraries before you install the maintenance release.

Chapter 2 Preparation

This chapter provides information about preparing for SUPEROPT installation. This chapter contains the following sections:

Overview

Before you install SUPEROPT, you must gather specific information. This chapter describes the materials that can help you install and customize SUPEROPT.

Required Materials

Table 2-1 lists the installation and customization documentation that you will need to install and customize SUPEROPT.

Table 2-1 Installation and Customization Documentation

Document	Description
release notes, flashes, and technical bulletins	provide important product information and last-minute information
3270 SUPEROPTIMIZER/CICS for VSE Installation Guide	provides installation planning information, instructions for setup and testing, and instructions for installation and customization
3270 SUPEROPTIMIZER/CICS Customization Guide	provides instructions for customizing 3270 SUPEROPTIMIZER/CICS for VSE or 3270 SUPEROPTIMIZER/CICS after the product has been installed

System Requirements and Environment

Your site must provide certain system requirements and an environment to support SUPEROPT.

Supported Software and Hardware

SUPEROPT supports the following software and hardware:

- VTAM (SNA and non-SNA), TCAM, and BTAM
- 3600 and 4700 controllers and 3790 devices with decompression capability
- all 3270 devices and character sets

SUPEROPT supports the following 3270 devices and character sets:

- color
- SCS printers
- extended attributes
- program symbols
- SNA data streams
- non-SNA data streams
- screen sizes:
  - 12 rows by 40 columns
  - 12 rows by 80 columns
  - 24 rows by 80 columns
  - 32 rows by 80 columns
  - 43 rows by 80 columns
  - 27 rows by 132 columns
  - any other valid screen or partition size

Software Requirements

Your site must have the VSE/ESA operating system.

Your site must also have one of the following versions of CICS:

- CICS Transaction Server (TS) for VSE
- CICS/VSE 2.3

SUPEROPT does *not* require the following items:

- temporary storage program
- basic mapping support (BMS)
- terminal control table user area (TCTUA)

CICS Environment

SUPEROPT requires the following facilities from CICS:

- command-level support
- CICS user exit interface
- 120 kilobytes (KB) of virtual storage for the Optimizer code
- 18 KB to 2 gigabytes (GB) for work areas (dependent on options)

In addition, BMC Software recommends the following facilities:

- VSAM support in the file control program for the COPOPT options file and for the COPRINT file

- inquire/set support for CICS (without this support, dynamic terminal areas are used for all terminals)

- transient data program for message handling and optional printing

Program Specifications and Storage Requirements

This section discusses Optimizer and Monitor components, features, and how storage is acquired.

Optimizer Component

The Optimizer component has the following characteristics and features:

- It is a CICS user-exit interface program written in assembler language.
- It is reentrant.
- It requires 120 KB of virtual storage and should be marked as resident.
- It supports RMODE=ANY AMODE=31.

Monitor Component

The Monitor component has the following characteristics and features:

- It is a CICS command-level assembler language program.
- It contains 94 KB of online help.
- It uses 38 KB for startup processing.
- It contains 238 KB of Monitor executable code.
- It contains 13 KB of messages.
- It does not need to be resident.
- It supports RMODE=ANY AMODE=31.

Storage Use

The Monitor displays statistics that show how much storage is being used and how many data streams were not optimized because the storage was insufficient.

BMC Software recommends that you keep track of the used storage so that the Optimizer does not have too much or too little storage.

Imaging and SCS Printer Data Storage Area

The Imaging® and SCS Printer Data Storage Area keeps a copy of what users see on their terminals or, for SCS, a copy of the current tab settings. In a VSE/ESA environment, you can specify any amount from 0 to 16,376 KB.

Data Stream Work Areas

Two Data Stream Work Areas hold a copy of the data stream that is being processed. You can specify any amount from 1 to 31 KB (the amount will apply to *each* area). For example, if 6 KB is entered, *each* area will be 6 KB.

3270 Buffer Work Areas

Three 3270 Buffer Work Areas hold copies of the 3270 buffer for the data stream that is being processed. You can specify any amount from 1 to 31 KB. This amount will be used for each of the three areas. For example, if 4 KB is entered, *each* area will be 4 KB.

Dynamic Terminal Areas

Dynamic terminal areas (DTAs) are used for terminals that are dynamically allocated by using the CICS Autoinstall feature. You can specify any *number* of areas from 0 to 32,767. Each terminal requires one DTA. Each area is 92 bytes.

The VSE/ESA operating system has a default Imaging storage value of 2048 KB and a default DTA value of 1000.

Note: To change the amount of Imaging storage, run the COPBSET program. For more information about the batch Set Options programs, see the *3270 SUPEROPTIMIZER/CICS Customization Guide*.

For more information about the CICS Autoinstall feature, see the *3270 SUPEROPTIMIZER/CICS Customization Guide*.

Transid Statistic Areas

Transid Statistic Areas are used to collect data stream optimization statistics by Transid. You can specify any *number* of areas from 0 to 32,767. (The default is 0.) Each area is 32 bytes.

Virtual Storage

All virtual storage is obtained above the 16 MB line. For information about minimizing the use of virtual storage, see the implementation tips in the *3270 SUPEROPTIMIZER/CICS Customization Guide*.

Storage Acquisition

SUPEROPT requires virtual storage for five data areas. Your site may control, from the Monitor, how much storage is acquired for each area. A default amount is provided for each area.

If the Optimizer does not have enough storage to perform optimization, no optimization will occur. The Optimizer will never acquire more storage than you specify.

Storage is acquired as follows:

- The COPOPT program requires 272 bytes of dynamic storage area (DSA) for all CICS releases.
- SUPEROPT uses storage in the extended dynamic storage area (EDSA).

Storage Requirements for SUPEROPT

Table 2-2 lists the requirements for calculating dynamic storage areas.

Warning! If you do not use the correct resource definition online (RDO) definitions and SUPEROPT is not started from the program list table (PLT), the product will use EUDSA, *not* ECDSA.

Table 2-2 Calculating Dynamic Storage Requirements for SUPEROPT

Storage Area	Space Requirement
CDSA	12 KB
ERDSA	136 KB (optimizing code) + 264 KB (COPMON) **Note:** If you are not using ERDSA, add this result to ECDSA.
ECDSA	To determine ECDSA, use the following calculation[a]: Imaging + SCS Storage + wrap trace buffer size + [number of terminal work areas × 144] + [number of transaction work areas × 48] + [data stream work area size × 2] + [3270 buffer work area size × 3]
EUDSA	0 KB (not used)
UDSA	0 KB (not used)

[a] Terminal work area = dynamic terminal work areas + number of terminals that are defined to CICS when COPINIT is run. For more information about this calculation, see Table 2-3.

Table 2-3 shows the panel number where the information for calculating ECDSA is located.

Table 2-3 Information for ECDSA Calculation

Information	Panel
Imaging	1.6.1
SCS Storage	1.6.1
wrap trace buffer size	3.4
number of terminal work areas	1.6.3
number of transaction work areas	1.6.3
data stream work area size	1.6.2
3270 buffer work area size	1.6.2

Installation Considerations

Before you install and start testing this product, gather the information that is listed in Table 2-4.

Table 2-4 Preinstallation Checklist

X	Item
	identify your CICS environment
	determine whether your site uses the CICS Autoinstall feature
	determine whether you have a multiregion operation (MRO) environment
	determine whether your operators use the **Erase Input** key
	determine whether your SCS printers support horizontal formatting control codes (Set Horizontal Format and Horizontal Tab)
	determine whether data streams are searched for specific information

The topics in this section will help you determine how these items are handled in your site.

Standard CICS User Exits

SUPEROPT uses only *standard* user exits that CICS provides:

- XKCREQ
- XPCFTCH
- XTCIN
- XTCOUT
- XTCTIN
- XTCTOUT
- XZCIN
- XZCOUT
- XZCOUT1
- XXMATT

Other programs in your CICS system may use one or more of these CICS exits. CICS passes control to the programs in “first enabled, first called” order. If you need the programs to get control in a certain order, BMC Software recommends that you use a PLT at CICS startup to specify the order in which the programs will be enabled.

SVA

If you are running several CICS systems, they can share a copy of the following modules:

- COPOPT
- COPOPT23
- COPOPT41
- COPOPT51
- COPOPT52
- COPOPT53
- COPOPTXA

These modules can also be placed in your shared virtual area (SVA).

MRO Environments

If your site is using MRO, install SUPEROPT in *each* terminal-owning region.

To optimize any terminals or printers that are owned by an application region, install the product in this region as well. The Optimizer optimizes data streams when the data streams are being sent to or from the terminal. Optimization does not occur when the data streams are sent between regions.

Warning! If the COPRINT print and/or the COPOPT options VSAM files are used, they *must be local* if you start the Optimizer by using a PLTPI parameter for program system initialization. If the files are remote, a U601 abend results. This is a CICS restriction. If a PLTPI is not used, both files can be remote.

CICS/ESA

If you are running CICS/ESA, COPINIT must run after the entry for DFHDELIM in the PLT startup.

If you use the CMDSEC=EXTERNAL option or PCT entries, COPSHUT must run before the entry for DFHDELIM in the PLT shutdown.

VSE/ESA

If your site uses a tape or disk management system, you must disable the tape or disk management system before you begin the installation or run the installation job on a partition that does not have the tape or disk management system running in it.

Installation Preparation

This section describes how to prepare for installation.

Back Up the COPOPT File

Before you begin *any* installation procedures, make a backup copy of the COPOPT options file. The option file format changed with 3270 SUPEROPTIMIZER/CICS 2.0, maintenance level 9011. Because of this format change, the file is no longer downward compatible.

Determine the Current Version (SUPEROPT Already Installed)

If SUPEROPT is installed at your site, you must determine the product version before proceeding with installation. If you are using 3270 SUPEROPTIMIZER/CICS for VSE 1, and exclude/include tables are defined, you must run a batch migration program before you can begin installation. With all subsequent versions, the migration is transparent and you must perform only a maintenance installation. To determine the product version, access the Monitor and look at the panel that is displayed.

If the Monitor panel resembles Figure 2-1 on page 2-12, 3270 SUPEROPTIMIZER/CICS version 2.5 or later is installed.

Figure 2-1 Sample Panel for 3270 SUPEROPTIMIZER/CICS 2.5 or Later

```
(Menu)                    3270 SUPEROPTIMIZER/CICS              June 30, 2001
Option. . ______                  Primary Menu                       12:59:29
                                 CICSID:CICSMGF

Type password.
  Current . . . . .
  New . . . . . .

Select a choice from below.           Optimizer status . . . : Inactive
_ 1. Optimization control             SUPEROPT Trial . . . . :   93 Days Remain
  2. Data Stream Statistics
  3. Data Stream Analysis             Imaging. . . . . : On
  4. Status                           Input Suppression. . . : On
                                      Erase Input Key Allowed: No
  9. Print or Reset Statistics        SCS Printer. . . . . : On
Select optimization control.
_ 1 . Start                           Version . . . . . : 3.0.05
  * . Stop                            Tape date . . . . . : June 24, 2001
  3 . Shutdown
  * . Cancel Shutdown                 VTAM Terminals identified by: CICS Termid

F1=Help  F2=Keys  F3=End  F4=Return  F6=Case  F9=Print
Copyrights (c) 1978-2001 BMC Software, Inc. as an unpublished licensed work.
```

Where to Go from Here

This book contains installation procedures for VSE/ESA environments. Select the appropriate procedures for your site. To determine which sections of the procedure to read, review the situations that are described in Table 2-5.

Table 2-5 Installation and Customization Situations

Situation	Reference
migrating from 3270 SUPEROPTIMIZER/CICS 1	contact BMC Software Customer Support
installing in a VSE/ESA environment	Chapter 3, “VSE/ESA Installation”
installing in an MVS environment	*OS/390 and z/OS Installer Guide*
changing release or modification levels	Chapter 3, “VSE/ESA Installation”
installing a maintenance tape	Chapter 3, “VSE/ESA Installation”
customizing SUPEROPT **Note:** Use the manual customization procedure when SUPEROPT has been installed in a VSE/ESA environment.	*3270 SUPEROPTIMIZER/CICS Customization Guide*

Chapter 3 VSE/ESA Installation

This chapter describes how to unload the VSO-labeled distribution tape. When you have unloaded the tape, you can customize the installation for your data center and complete the required customization steps. For instructions on customizing a VSE/ESA installation, see the *3270 SUPEROPTIMIZER/CICS Customization Guide*.

This chapter contains the following sections:

Overview

Before you begin installation, identify an existing library and sublibrary name (*lib.sublib*) to which you will unload the files from tape. If these libraries do not exist, you must allocate the necessary data sets.

When unloading the tape, you can specify 31-bit addressing or 24-bit addressing for the execution mode if you are using extended storage. If you are not using extended storage, you must install the product in 24-bit mode. If you want to run in 31-bit *and* 24-bit modes, you must install the product twice and link each version to separate core image libraries.

To run in 31-bit mode, your VSE/ESA system must be configured with MODE=ESA or MODE=VMESA. With your VSE/ESA system defined as MODE=ESA or VMESA, storage GETMAINs and program execution can occur above the 16 MB line. Your CICS partition's private area size (PASIZE) must also contain storage above the 16 MB line.

Unloading a VSE/ESA Distribution Tape for Installation

Summary: In this task, you will complete the unload process for a VSE/ESA distribution tape.

Note: The load library and the optional COPOPT and COPRINT files must be added to the CICS partition.

All programs will be AMODE31 except COPOPT.

Access the VSE console by using the appropriate method for your site. To unload the tape, perform the following steps:

Step 1 Start a reader to the tape device on which the SUPEROPT tape is mounted by typing the following command:

s rdr,<*cuu*>

Replace <*cuu*> with the actual tape drive address.

Step 2 Press **Enter**.

The job BMCINSTL is read into your POWER RDR queue. The execution disposition is set to HOLD.

Step 3 Release the BMCINSTL job for execution by typing the following command:

a rdr,bmcinstl,disp=d

The job BMCINSTL begins to execute. The console returns the following message:

```
*BG 000 EOJ PAUSEBG
```

Step 4 Press **Enter**.

Instructions for the first action that you must take are displayed with the following message:

```
*BG 000 // PAUSE * Please read above comments and respond
accordingly. *
```

Step 5 Specify the private core image library name that will contain the executable phases by typing the following command:

//setparm phslib='<*lib.sublib*>'

Replace <*lib.sublib*> with a library name that is appropriate for your site. The console returns the following message:

```
*BG-000  0D16D  READY
```

Step 6 Press **Enter**.

Instructions for the second action that you must take are displayed with the following message:

```
*BG 000 // PAUSE * Please read above comments and respond
accordingly. *
```

Step 7 Specify the source book library name that will contain the sample JCL, user exits, and other source installation materials by typing the following command:

//setparm srclib='<*lib.sublib*>'

Replace <*lib.sublib*> with library name that is appropriate for your site. The console returns the following message:

```
*BG-000  0D16D  READY
```

Step 8 Press **Enter**.

Instructions for the third action that you must take are displayed with the following message:

```
*BG 000 // PAUSE * Please read above comments and respond
accordingly. *
```

Step 9 Specify the execution mode, 24-bit addressing or 31-bit addressing, by typing *one* of the following commands:

- **//setparm exmode='31'**
- **//setparm exmode='24'**

Step 10 Press **Enter**.

The console returns the following message:

```
*BG 000 EOJ BMCINSTL MAX.RETURN CODE=0000
```

A maximum return code of 0000 indicates successful completion. The product on the tape has now been unloaded to disk.

Step 11 (*optional*) Shut down CICS.

Step 12 If you performed Step 11, restart CICS with the new library to make the maintenance release effective.

Where to Go from Here

For procedures about customizing and completing the installation, see one of the following sources:

Activity	Reference
customizing your installation	*3270 SUPEROPTIMIZER/CICS Customization Guide*
starting the Optimizer	*3270 SUPEROPTIMIZER/CICS User Guide*
putting the Optimizer into production	*3270 SUPEROPTIMIZER/CICS Customization Guide*

Appendix A BMC Software Product Authorization

This appendix explains how to perform product authorization. This appendix contains the following sections:

Overview

When the Customer Password Response department of BMC Software processes a license agreement for a product, it issues *CPU authorization passwords*. These passwords authorize specific CPUs (also referred to as processors) to run the licensed product. Because BMC Software licenses its products for use on individual CPUs, the passwords are product-specific and CPU-specific (one license per product per CPU). To delete or replace an authorized CPU, you must also have a password.

The types of passwords are as follows:

- Temporary passwords are issued for product trials or for other special circumstances (for example, when a hardware failure prevents you from using the authorized CPU).

- Permanent passwords are issued when you convert to a permanent license; delete or replace a CPU; or modify the properties of a CPU or the product-authorization tables.

You use the BMC Software Product Authorization utility to apply passwords and to change your CPU configuration.

Note: You do not need to apply passwords or update CPU authorization when you install product maintenance or version upgrades.

Passwords can be processed in one of the following ways:

- as part of an online procedure

- in a batch interface that uses a job that is supplied on the product distribution tape

- through the CPU ID authorization transaction COPA, which is called directly from CICS

This appendix describes the process that you use to apply passwords and to reconfigure your CPU, either permanently or temporarily. If you have additional authorization questions or concerns about the Product Authorization utility, contact your BMC Software sales representative.

Product-Authorization Tables

When you apply passwords, the BMC Software Product Authorization utility builds or updates product-authorization tables. The utility uses passwords to create entries in the tables that define the authorization for the product and to validate software licenses.

The Product Authorization utility works with product-authorization tables as follows:

- The Product Authorization utility builds or updates a permanent product-authorization table when you install or apply a permanent password. The permanent table controls which CPUs are licensed to run the product, based on the serial number, the model number, and the submodel number of the unit.

- The Product Authorization utility builds or updates a temporary product-authorization table when you apply a temporary password.

Fore more information about permanent and temporary passwords, see “Displaying Current Processor Information for VSE/ESA” on page A-11.

Product-authorization tables are product-specific and are identified by the three-character product code, as in the following examples (where the variable *ppp* is the three-character CSO product code):

ppp`TBL3P` (permanent)

ppp`TBL3T` (temporary)

Product Authorization Passwords

Valid passwords can include the following characters:

- the alphanumeric character set, excluding the letters *I* and *O* (to avoid confusion with the numbers 1 (one) and 0 (zero)

- equal sign (=), “at” sign (@), and plus sign (+)

  Note: If your keyboard does not have the “at” sign (@), you can use the asterisk (*) in place of @. You can use these two characters (@ and *) interchangeably when typing passwords.

Permanent Passwords

Permanent passwords update a product's permanent authorization table. Each permanent password has one of the functions that are described in Table A-1. When you apply a permanent password, the Product Authorization utility automatically recognizes the password's function and prompts you accordingly.

Table A-1 Permanent Password Functions

Function	Description
Add	authorizes one new CPU to run the product
Delete	removes one CPU from the table, preventing that CPU from running the product
Replace	replaces one CPU in the table with another CPU, allowing the new CPU to run the product in place of the old CPU
Modify	modifies one or more properties of one CPU that currently exists in the product-authorization table. CPU properties that can be modified include the version code, number of significant digits for the serial number, tier, maximum number of processors, and product license expiration date.

Temporary Passwords

BMC Software issues temporary passwords to customers who are evaluating products on a trial basis or to customers who need to bypass product authorization to run a product temporarily on an unlicensed CPU. Temporary passwords have a specific expiration date, which is part of the password.

How to Apply Passwords

A password is an activation key for the software license, not the software license itself. Apply your new passwords as soon as possible after you receive them because temporary passwords have a limited lifespan, which is typically 30 days.

You can apply the new passwords before you completely install the product if you have installed the Product Authorization utility and have created the password library. Also, you can apply the passwords even if the product is not yet running on a specific CPU. For example, if your installation process requires that you install and run the product on a test system before migrating it to the production system, you can apply the password for the production system's CPU, even though the product is not yet running there.

BMC Software products expect to find passwords in the product core image library.

How Products Are Licensed

You must use the Product Authorization utility in the following situations:

- for product trials and permanent licensing
- when upgrading to a new CPU
- when an authorized CPU fails

Note: Although you do not need the Product Authorization utility for product maintenance and version upgrades, you must consider certain issues that are associated with these upgrades. For more information, see "Product Maintenance or Version Upgrades" on page A-7.

Product Trials and Permanent Licensing

During a trial period for a BMC Software product, you can install and use the product on any CPU by using a temporary password that is obtained from your BMC Software sales representative. When you finish the trial and you want to obtain a product license, the following rules apply:

- You must purchase a product license for each CPU on which you will run the product.
- BMC Software Customer Password Response issues a permanent password for each combination of CPU and licensed product.
- To enable a product on a CPU, you must add the permanent password that is issued for that CPU. You do *not* need to reinstall and retest the product.
- You can install multiple passwords in the same product library. This capability lets you use the same load library to run a product on multiple CPUs or to install a product at a central site and run it at remote sites.

CPU Upgrades

When you upgrade to a new CPU, you *must obtain a new permanent password for each product that you want to use on that CPU*. When you install the new password, the old entry in the authorization table for the product is replaced. The new table entry defines the authorization for the product.

CPU Failures

If a hardware failure or a disaster-recovery situation prevents use of the licensed CPU, BMC Software can provide a temporary licence that lets the product run on a backup CPU for a limited time. Before the temporary license expires, you must acquire a permanent license for the new CPU or resume using the original CPU. When the temporary password expires, you will no longer be able to run the product on the temporary CPU. If this situation occurs, you must obtain a new password.

Updating Product-Authorization Tables

To trigger the grace period, the license validation process must update the authorization tables. If the password library must be WRITE-protected, problems could occur with updates. To avoid problems, you can place the authorization tables in another data set and concatenate that data set to the password library.

The concatenated authorization-table library should have the same DCB attributes as the product's load library. (The RECFM for the table library must be *U*.) If you have several BMC Software products, you may want to dedicate one library that includes all authorization tables for all products.

Before updating the library that contains the authorization tables, the license validation process determines whether the data set is in LNKLST. If the data set is in LNKLST, the license validation process does not attempt an update.

Running a Product on an Unlicensed Processor

When you run a product on an unlicensed processor, a 15-calendar-day grace period can be triggered. After this grace period expires, the product will not run or will run with diminished functionality.

Note: The product will continue to function normally when run on a licensed CPU, even if the grace period has been triggered or has expired.

To prevent this situation, you should obtain a RESET password from BMC Software Customer Password Response. If you apply the RESET password before the grace period ends, it updates the product-authorization table and makes another 15-calendar-day grace period available.

When the grace period is triggered, the Product Authorization utility (either online or in batch mode) and the affected product issue a message that advises you of the expiration date.

Product Maintenance or Version Upgrades

Installing a new maintenance level or upgrading the version or release level of a product has no effect on product authorization. No new passwords are required; however, you must ensure that your authorization tables reside in the new production libraries. If you install products in a test environment before moving them to production, the authorization tables must also reside in the test libraries. If you try to execute the product on a different CPU, that CPU must also be licensed.

Copy the product-authorization tables from the “old” library to the “new” library that contains the product’s new maintenance or upgrade. To copy the tables from the old library to the new library, use the job *prd*CPUID, where the variable *prd* is the three-character product code.

Although the product-authorization tables typically reside in the product’s load library, these tables are not load modules. If you are running ISPF 4.2 or later, you might not be able to copy these tables by using the ISPF Move/Copy utility (option 3.3). You could receive a STOW error, or one or more of the following error messages:

```
IEW2515W 4731 DIRECTORY ENTRY FOR prdTBL3n IDENTIFIED BY
DDNAME ISPxxxxx IS NOT MARKED AS LOAD MODULE.

IEW2522E 470E MEMBER prdTBL3n IDENTIFIED BY DDNAME
ISPxxxxx... IS NOT A LOAD MODULE- (INVALID RECORD TYPE).

IEW2307S 1032 CURRENT INPUT MODULE NOT INCLUDED BECAUSE
OF INVALID DATA.

COPY FAILED FOR MEMBER prdTBL3n.  FAILURE IN IEWBIND
INCLUDE, RETURN CODE 8 REASON CODE 83000507
```

In these messages, the variable *xxxxx* is the DD name, *prd* is the 3-character product code, and *n* is either P (permanent) or T (temporary). For more information, see “Product-Authorization Tables” on page A-3.

If you receive any of these messages, use the IEBCOPY utility to copy the tables. Do not use the IEBCOPY COPYMOD parameter when copying the product-authorization tables.

How to Obtain Passwords

Table A-2 describes the situations in which you need to obtain passwords. For each scenario, the table indicates the type of password that you need (temporary or permanent), what the password does, and how to obtain the password.

Table A-2 Password Scenarios

Scenario	Password Type	Password Function	Obtain From
You want to begin a free trial period.	temporary	temporarily bypasses authorization checking and lets you run the product on any CPU for a limited time	BMC Software sales representative
You purchase a license for a new product.	permanent	adds a designated CPU to the list of CPUs that are authorized to run a licensed product	BMC Software sales representative or Customer Password Response (1-800-841-2031)
You stop using an authorized CPU.	permanent	removes a designated CPU from the list of CPUs that are authorized to run a licensed product	BMC Software sales representative or Customer Password Response (1-800-841-2031)
You upgrade to a new CPU.	permanent	authorizes the transfer of a license from one CPU to another CPU	BMC Software sales representative or Customer Password Response (1-800-841-2031)
You want to run the product on an additional CPU.	permanent	adds a designated CPU to the list of CPUs that are authorized to run a licensed product	BMC Software sales representative or Customer Password Response (1-800-841-2031)
The authorized CPU is not available because of an emergency (such as hardware failure).	temporary	temporarily bypasses authorization checking and allows you to run the product on any CPU for a limited time	BMC Software sales representative, Customer Password Response (1-800-841-2031), or Customer Support (1-800-537-1813)

CPU Information

When you request a permanent product license from BMC Software, you must furnish information about the affected CPUs. For each product that you license, use the worksheet in Table A-3 to record the CPU information and the passwords that you receive from BMC Software. The first line of the table provides a sample entry for a 9X2 with three processors and a CPU ID of 10309-9021-DA.

Note: CPU information is not needed for temporary passwords.

Table A-3 Product Authorization Worksheet

CPU Serial	CPU Type	Version Code	CPU Model	No. of CPUs	Permanent Password
10309	9021	DA	9X2	3	123,456,789,ABC
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __
__ __ __ __ __	__ __ __ __	__ __	__ __ _	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __
__ __ __ __ __	__ __ __ __	__ __	__ __ __	__ __	__ __ __ ,__ __ __, __ __ __ ,__ __ __

For information about determining your CPU ID, see “Displaying Current Processor Information for VSE/ESA” on page A-11 or use the LIST option of Batch Product Authorization.

Displaying Current Processor Information for VSE/ESA

To determine the CPU serial number and model number for your system in a VSE environment, follow the steps in Table A-4. *Perform these steps for each licensed CPU.*

Table A-4 Determining CPU Serial and Model Numbers for VSE/ESA

Step	Action	Result
1	Type the following command at the VSE console: **DSPLY 000080** Press **Enter**.	The following message is sent to the console log: `AR 015 XXXXXXXX` In the message, *XXXXXXXX* is a hexadecimal address. For example, 000005AC.
2	Add X'70' to the *XXXXXXXX* to get *yyyyyyyy*.	*yyyyyyyy* = *XXXXXXXX* + X'70' For example: *yyyyyyyy* = 000005AC + X'70' = 0000061C
3	Type the following command at the VSE console: **DSPLY** *zzzzzz* In this command, *zzzzzz* is the last six characters of *yyyyyyyy* from Step 2. For example: *zzzzzz* = 00061C. Press **Enter**.	The following message is sent to the console log: `AR 015 aaaaaaaa` In the message, *aaaaaaaa* is a hexadecimal address. For example, 00000640.
4	Type the following command at the VSE console: **DSPLY** *bbbbbb* In this command, *bbbbbb* is the last six characters of *aaaaaaaa* from Step 3. For example: *bbbbbb* = 000640. Press **Enter**.	The following message is sent to the console log: `AR 015 ssssssss mmmmmmmm` For example: AR 015 FF227130 30900000
5	Record the CPU ID and model number in Table A-3 on page A-10. The CPU ID is the last five characters of *ssssssss* from Step 4. The model number is the first four characters of *mmmmmmmm* from Step 4. For example: *ssssssss* = FF227130 and *mmmmmmmm* = 30900000. The CPU ID is 27130, and the model number is 3090.	NA
6	To continue, see "Batch Product Authorization" on page A-12.	NA

Batch Product Authorization

This section describes the batch interface that is used for product authorization. If you prefer to use the online interface, see “Displaying Current Processor Information for VSE/ESA” on page A-11.

By using the batch interface, you can perform the following tasks:

- process a password
- obtain current product authorization and processor information

Executing Batch Product Authorization

Figure A-1 is a sample of a JCL script for executing batch product authorization in a VSE/ESA environment. This JCL is in the source statement library in book CSOSEC3B.

Figure A-1 Sample JCL for Executing Batch Product Authorization for VSE/ESA

```
* $$ JOB JNM=BMCAUTH,CLASS=A,DISP=D
* $$ LST CLASS=A,DISP=D
// JOB BMCAUTH
// ASSGN SYSLST,PRINTER
*     THIS JOB WILL APPLY CPU ID AUTHORIZATION FOR
*     CICS SUPEROPTIMIZER.  YOU WILL USE THIS
*     JOB TO ENABLE THE PRODUCT FOR PERMANENT USE
*     AFTER THE LICENSE AGREEMENTS HAVE BEEN SIGNED.
// PAUSE   DO NOT RUN THIS IN A DYNAMIC PARTITION!!!!
// LIBDEF PHASE,CATALOG=LIBNAME,SEARCH=LIBNAME
// OPTION CATAL
// EXEC CSOSEC3B,PARM=CSO
****  PROCESS AN ADD PASSWORD AND LIST RESULTS ****
PSWD=AE@,82G,91#,C7$  NEWCPUID=11111-9021
****  PROCESS A DELETE PASSWORD AND LIST RESULTS ****
PSWD=BE@,AD0,32$,7C#  OLDCPUID=31091-9121
****  PROCESS A REPLACE PASSWORD AND LIST RESULTS ****
PSWD=ARF,56C,##1,C7$  OLDCPUID=31001-3390 NEWCPUID=31091-3381
****  PROCESS A BYPASS PASSWORD
PSWD=123,456,789,ABC
**** PROCESS A TEMPORARY PASSWORD AND LIST RESULTS ****
PSWD=AE@,B32,#1C,D7#
****  REPORT THE PROCESSOR INFORMATION AND AUTHORIZATION ****
LIST
/&
* $$ EOJ
```

JOB Varies, depending on the your system.

EXEC Identifies the program (CSOSEC3B) and passes the product code in the **PARM=** field.

Control Statements and Keywords

Certain tasks require different input parameters. These parameters change, depending on the type of password that you are installing. The following syntax rules apply to the control statements:

- Control statements are free-form. They can begin in any column.
- Uppercase characters are required.
- At least one blank space must be inserted between individual keywords and data fields. Multiple blanks are acceptable.
- To insert comments, type an asterisk (*) in column 1 of each line containing the comment. Comments following keywords are not allowed.
- The LIST keyword cannot be specified on the same line as PSWD, NEWCPUID, and OLDCPUID.

Table A-5 describes the control statement keywords.

Table A-5 Control Statement Keywords

Keyword	Data	Explanation
PSWD	Twelve-character password formatted as four fields of three characters each, separated by a comma or a blank (see sample JCL). Twelve continuous characters are also accepted.	Valid characters are alphanumeric (excluding the letters *I* and *O*. to avoid confusion with the numbers *1* and *0*). Valid special characters include the =, +, and @ characters. An asterisk (*) can be substituted for the “at” sign (@) when @ is not available on the keyboard.
NEWCPUID	Five-digit serial number, followed by a hyphen and a four-digit model number.	Serial number and model number must be hexadecimal characters separated by a single hyphen.
OLDCPUID	Five-digit serial number, followed by a hyphen and a four-digit model number.	Serial number and model number must be hexadecimal characters separated by a single hyphen.
LIST	NA	This keyword prints a report showing the contents of the product-authorization tables and information about the processor on which the job is executing.

Return Codes

0 = All requests completed successfully. For messages about each operation, see SYSPRINT output.

4 = A LIST was requested, but no tables existed in the load library.

8 = An error occurred that prevented completion of all of your requests. For messages about the error and any completed operations, see SYSPRINT output.

CICS Online Processing

If you are using existing CICS transaction and program definition groups, the following entries must be added:

Name	Program Definition
COPPSWDV	VSE/ESA
COPPSMV	VSE/ESA

Note: COPA transaction definition must point to COPPSWDM or COPPSWDV.

These definitions are supplied in COPPPT and COPPCT members of the source statement library.

Displaying the VSE/ESA Authorization Code Maintenance Panel

Figure A-2 shows a sample VSE/ESA Authorization Code Maintenance panel that is displayed when you type the transaction COPA and press **Enter**.

Figure A-2 Authorization Code Maintenance Panel for VSE/ESA

```
                        3270 SUPEROPTIMIZER/CICS          November 21, 2002
                      Authorization Code Maintenance              20:09:41
                            APPLID:  RWBV22T
                          CPUID: 10523  TYPE: 9021 FF

_ Select Type of Maintenance
  1.  Add
  2.  Replace
  3.  Delete
  4.  Bypass (Temporary)
  5.  List

_ Select Product:
  1.  SUPEROPTIMIZER

  LIBDEF STATEMENT:  // LIBDEF PHASE,CATALOG=LIBNAME,SEARCH=LIBNAME_________


  Authorization Code:  ___ , ___ , ___ , ___   (Supplied by BMC)
  NEWCPUID: _____ TYPE: ____                   (Not needed for Bypass)
  OLDCPUID: _____ TYPE: ____                   (Used for Replace and Delete)

F1=HELP    F3=END    F4=RETURN    ENTER=CONTINUE
```

Executing the COPA Transaction in VSE/ESA

To use the COPA transaction with VSE/ESA, perform the steps that are described in Table A-6.

Table A-6 Using the COPA Transaction with VSE/ESA (Part 1 of 2)

Step	Action	Result
1	Log on to CICS, and type the transaction ID **COPA**.	The Authorization Code Maintenance panel is displayed, along with the active function keys. (See Figure A-2 on page A-15.) The cursor is at the **Select Type of Maintenance** field.
	To access online Help, press **F1**.	A SUPEROPT Authorization Code Maintenance Help panel is displayed.
2	Select an online authorization activity: • Add • Replace • Delete • Bypass • List	The cursor moves to the **Select Product** field.
3	Select **SUPEROPTIMIZER**.	The cursor moves to the **LIBDEF STATEMENT** field.
4	Provide the library definition statement that indicates where the product has been installed. Move the cursor to the **Authorization Code** field.	NA
5	Type the CPU ID authorization code that you received from the BMC Software Contracts Administration department.	The cursor moves to the **NEWCPUID** field.
6	Type the new CPU ID number for the CPU that you are authorizing. (The CPU ID on which you are currently running is displayed near the top of the panel.)	The cursor moves to the **TYPE** field.
7	Type the model number (type) for the CPU that you are authorizing. (The type for the CPU on which you are currently running is displayed near the top of the panel.)	The cursor moves to the **OLDCPUID** field.
8	If you have selected Add, Delete, or Bypass, press **Enter**. If you have selected Replace, provide the **OLDCPUID** number and the **TYPE**. Press **Enter**. If you have selected List, no other entries are required.	The transaction generates the JCL for the authorization job. This unprotected job card information is displayed in the upper portion of a second panel (such as the panel that is shown in Figure A-3 on page A-17).
9	Modify the JCL as needed to suit your needs.	NA
	To access online Help, press **F1**.	A SUPEROPT Authorization Code Maintenance Help panel is displayed.

Table A-6 Using the COPA Transaction with VSE/ESA (Part 2 of 2)

Step	Action	Result
10	In the lower portion of the panel, type **S** to select **SPOOL TO POWER WITH EXEC CICS SPOOL Commands**.	NA
11	Press **F10** or **F3**.	**F10** completes the transaction; **F3** cancels it.

Second VSE/ESA Authorization Code Maintenance Panel

Figure A-3 shows a sample panel that is displayed for VSE/ESA after you have provided all of the necessary information on the Authorization Code Maintenance panel and pressed **Enter.** The upper portion of the panel shows the unprotected JCL that is generated when you press **Enter** on the previous panel. The lower portion of the panel displays the batch job destination option that you can select.

Figure A-3 Second Authorization Code Maintenance Panel, Showing Sample JCL for VSE/ESA

```
* $$ JOB JNM=BMCAUTH,CLASS=A,DISP=D
* $$ LST CLASS=A,DISP=D
// JOB BMCAUTH
// ASSGN SYSLST,PRINTER
*     THIS JOB WILL APPLY CPU ID AUTHORIZATION FOR
*     CICS SUPEROPTIMIZER.  YOU WILL USE THIS
*     JOB TO ENABLE THE PRODUCT FOR PERMANENT USE
*     AFTER THE LICENSE AGREEMENTS HAVE BEEN SIGNED.
// PAUSE   DO NOT RUN THIS IN A DYNAMIC PARTITION!!!!
// LIBDEF PHASE,CATALOG=USR1.SYS1,SEARCH=USR1.SYS1
// OPTION CATAL
// EXEC CSOSEC3B,PARM='CSO'
       NEWCPUID=12345-9021 PSWD=ABC,DEF,GHK,MNP
/*
/&
* $$ EOJ
==========>>>>  The above JCL is unprotected and may be altered.  <<<<==========


         SPOOL TO POWER WITH EXEC CICS SPOOL Commands.......  _   (S to Select)


  F1=HELP    F3=END    F4=RETURN        F10=WRITE JCL TO DESTINATION
```

Glossary

AID

Attention Identifier. The AID appears as the first byte in an inbound 3270 data stream. It indicates the source or type of data that follows. If the inbound data stream consists of structured fields, an additional AID byte can be embedded in the inbound 3270 data stream structured field. Valid AID bytes are as follows:

- **60** (No AID generated)
- **E8** (No AID generated)
- **88** (Structured field)
- **61** (Read partition)
- **7F** (Trigger action)
- **F1** (F1 key)
- **F2** (F2 key)
- **F3** (F3 key)
- **F4** (F4 key)
- **F5** (F5 key)
- **F6** (F6 key)
- **F7** (F7 key)
- **F8** (F8 key)
- **F9** (F9 key)
- **7A** (F10 key)
- **7B** (F11 key)
- **7C** (F12 key)
- **C1** (F13 key)
- **C2** (F14 key)
- **C3** (F15 key)
- **C4** (F16 key)
- **C5** (F17 key)
- **C6** (F18 key)
- **C7** (F19 key)
- **C8** (F20 key)
- **C9** (F21 key)
- **4A** (F22 key)
- **4B** (F23 key)

- **4C** (F24 key)
- **6C** (PA1 key)
- **6E** (PA2 key)
- **6B** (PA3 key)
- **6D** (Clear key)
- **6A** (Clear partition key)
- **7D** (Enter key)
- **7E** (Selector pen attention)
- **E6** (Magnetic Operator ID reader)
- **E7** (Magnetic reader number)

Basic Telecommunications Access Method
: One of the Telecommunications access methods that CICS and SUPEROPT support.

BTAM
: *See* Basic Telecommunications Access Method.

Common User Access
: A set of basic online interface principles, techniques, and components for software applications developed to run on non-programmable terminals in IBM SAA operating environments.

CUA
: *See* Common User Access.

DBCS
: *See* double-byte character set.

DCT
: *See* destination control table.

destination control table
: A table that controls the routing of certain internal and external queues. The SUPEROPT product uses the DCT to queue CSMT to log critical messages—CSMT is a CICS-required DCT queue. The product also uses a DCT queue to print screens.

direct storage access
: The ability to place input and output data in storage and to retrieve it without passing the data through the central processor.

double-byte character set
: In countries where an alphabet is not used, characters are used to represent words. Since a single byte character set (SBCS) can have at most 256 characters, a double byte character set, using two bytes, is used. This provides for 65,536 (256 times 256) possible characters.

DSA
: *See* direct storage access.

ECSA
: Acronym for extended common service area.

EDSA Acronym for extended direct service area.

ELPA Acronym for extended link pack area.

FCT *See* file control table.

field On a 3270, field refers to an area on the screen that starts with an attribute byte and ends with the next attribute byte. All characters, except on terminals with extended attributes in the field, share the same attributes: bright, protected, and so forth.

file control table This table defines files to CICS. SUPEROPT uses the file COPOPT to record the current status of the Optimizer, as well as all user-specified options.

SUPEROPT can also optionally use a file for printing.

high-level qualifier One or more parts of a data set name that combine with a low-level qualifier or a suffix to make the complete data set name.

HLQ *See* high-level qualifier.

link pack area An area of virtual storage containing reentrant routines that can be used concurrently by all tasks in the system.

local shared resources Files that share a common pool of buffers and a common pool of strings, that is, control blocks supporting the I/O operation.

LPA *See* link pack area.

LSR *See* local shared resources.

MDT *See* modified data tag.

modified data tag A bit in each attribute byte describing the field in the 3270 buffer. This bit is set *on* if the terminal operator modifies the field, or it can be *set pre-modified* by the application program. On a subsequent read-modified command, only the modified fields are sent back to the CPU or communications controller.

MRO *See* multiregion operation.

multiregion operation A mechanism by which different CICS address spaces and partitions within the same CPU can communicate and share resources.

PCT *See* program control table.

PLT *See* program list table.

PLTPI *See* program list table program initialization.

PLTSD *See* program list table shutdown.

PPT *See* program processing table.

program control table
The PCT defines transactions to CICS. You can invoke the Monitor by using the Transid identified in the PCT.

program list table This table defines programs to CICS. In CICS, the PLTPI is a list of programs invoked during CICS System Initialization processing. The Monitor module, COPINIT, if placed in this list, can optionally start the Optimizer at system initialization time automatically. For more information, see the *3270 SUPEROPTIMIZER/CICS Customization Guide*.

program list table for program initialization
The PLTPI is a list of programs invoked during CICS System Initialization processing.

program list table shutdown
This table contains a list of programs invoked during CICS shutdown processing. The Monitor module, COPMON, if placed in this list, can optionally print the Monitor screens at shutdown time to provide a permanent record of performance data. The Optimizer is also stopped. For more information, see the *3270 SUPEROPTIMIZER/CICS Customization Guide*.

program processing table
This table defines the list of programs and their properties for CICS. There are five required entries in the PPT for SUPEROPT and a number of optional entries.

RDO *See* resource definition online.

resource definition online
A CICS facility that lets you interactively create and modify resources.

SIT *See* system initialization table.

SMS *See* storage management subsystem.

SMF *See* system management facilities.

SNA data streams System Network Architecture. Refers to data streams that contain special SNA characters for formatting the data streams.

Storage Management Subsystem
An MVS component that is used to automate and centralize storage management. It provides control over data class, storage class, management class, storage group, and automatic class selection (ACS) routine definitions.

SVA Acronym for shared virtual area.

system initialization table
This table describes the initialization parameters that CICS uses. The SUPEROPT product requires two parameters to be set in this table or in the parameter overrides.

system management facilities
An optional control program feature of MVS that provides gathering and recording information that can be used to evaluate system use.

VOLSER *See* volume serial number.

volume A portion of storage on a tape or disk that can be conveniently handled as a unit.

volume serial number
A number in the volume label that may be assigned to a tape or disk when the volume is prepared for use in a system.

VSAM Virtual Storage Access Method. The access method used by SUPEROPT for the COPOPT file and all optional files for printing.

VTAM Virtual Telecommunications Access Method. One of the Telecommunications access methods that CICS and SUPEROPT support.

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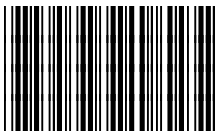

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